

Response to Office Action dated November 16, 2005

### **REMARKS**

Claims 1-6 are currently pending. Applicants respectfully request reconsideration of the application in view of the above amendments and in view of the following remarks.

### **OBJECTIONS TO THE SPECIFICATION**

The specification has been objected to based on several informalities. Applicants have made the appropriate changes and therefore request this ground of objection be withdrawn.

### **CLAIM REJECTIONS – 35 U.S.C. § 102**

Claims 1 and 2 have been rejected under 35 U.S.C. § 102 as being allegedly anticipated by U.S. Patent No. 2,450,289 to Marek (“Marek”). Applicants traverse this rejection and respectfully submit that the claims as properly understood by those skilled in the art are patentably distinct from the cited reference.

Independent claim 1 recites, *inter alia*, “[a] solid filling tank comprising . . . a heat exchanger disposed within the tank main body, wherein the heat exchanger comprises . . . a plurality of heat-transferring fins . . . wherein the heat-transferring fins comprise a restricting portion configured to restrict movement of the solid particles in a subsiding direction of the solid particles.” Applicants submit that the cited reference does not disclose, teach or suggest a solid filling tank as recited in independent claim 1.

Marek’s sorber device does not anticipate the claimed subject matter. Specifically, Marek discloses a “[r]eaction chamber 11 [that] consists of a holder 12 which encloses powder bed 13. The powder bed consists of an oxygen regenerative chemical packed

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around heat exchange finned tubes 14 . . . . The finned tubes are provided with fins 14A and serve to carry heat from a heat transfer material to the chemical. . . .” (Marek col. 4, ll. 57-60).

In contrast to Marek’s device, independent claim 1 recites, *inter alia*, “heat transferring fins [that] comprise *a restricting portion* configured to restrict movement of the solid particles in a subsiding direction of the solid particles.” (emphasis added). Marek does not teach, disclose or suggest a sorber device having “*a restricting portion*,” as recited in independent claim 1. Therefore, Applicants submit that the finned tubes disclosed in Marek do not anticipate at least the heat transferring fins of the claimed subject matter.

Moreover, in contrast to the claimed subject matter, the tubes 14 of Marek cannot support solid particles (MH powders). As apparent from Figure 1 of Marek, the tubes 14 have a circular cross-section. Therefore, when solid particles are disposed on top of the tubes 14, the particles will slip off unless the tubes 14 are provided with a member other than the fins to prevent the particles from slipping off.

Therefore, Applicants submit that independent claim 1 is patentably distinct from Marek. Further, Applicants submit that claim 2, which directly depends from claim 1 is also patentably distinct for at least a similar reason. Therefore, Applicants request withdrawal of this ground of rejection.

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**CLAIM REJECTIONS – 35 U.S.C. § 103**

Claim 6 has been rejected under 35 U.S.C. § 103 as allegedly being unpatentable over Marek in view of U.S. Patent No. 6,432,176 to Klos et al. (“Klos et al.”). Applicants submit that claim 6 is patentably distinct from the cited references taken either alone or in combination.

The Office Action alleges that although Marek fails to disclose “the sorbent material being capable of sorbing hydrogen,” Klos et al. discloses “a container containing hydrogen sorbing alloy, with such container including heat exchange means [and therefore] [i]t would have been obvious to one of ordinary skill in the art, at the time the invention was made, to utilize a hydrogen sorbing material within the container of Marek.” (See 8/25/05 Office Action, pp 2-3).

Applicants respectfully disagree that Klos et al. remedies the deficiencies of Marek. Applicants submit that Marek, in view of Klos et al. does not render the claimed subject matter obvious to a person of ordinary skill in the art.

According to MPEP § 2143.01, “[i]f the proposed modification or combination of the prior art would change the principle of operation of the prior art invention being modified, then the teachings of the references are not sufficient to render the claims *prima facie obvious*. *In re Ratti*, 270 F.2d 810, 123 USPQ 349 (CCPA 1959).” (emphasis added). Assuming arguendo that there exists some motivation to combine the cited references, the principle operation of the sorber device of Marek would change if the alleged teachings of Klos et al. modified the sorber device of Marek. Further, a proposed modification of the sorber device of Marek would render it unsatisfactory for its intended purpose. See MPEP § 2143.01. According to the Office action,

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“[i]t would have been obvious to one of ordinary skill in the art . . . to utilize a hydrogen sorbing alloy within the container of Marek.” (See 8/25/05 Office Action, pp 2-3). Marek discloses a container “which encloses powder bed 13 . . . consist[ing] of an oxygen regenerative chemical.” (Marek col. 4, ll. 57-59). However, because the chemical properties of hydrogen sorbing alloy differ from those of the “oxygen regenerative chemical” disclosed in Marek, use of a hydrogen sorbing alloy would be unsatisfactory for the intended purpose of Marek, namely sorbing and desorbing oxygen. Therefore, Applicants submit that a prima facie case of obviousness has not been established.

**CONCLUSION**

Based on the foregoing amendments and remarks, Applicants respectfully request reconsideration and withdrawal of the rejection of claims and allowance of this application.

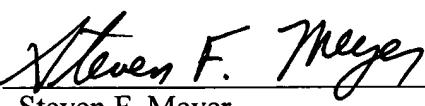
**AUTHORIZATION**

The Commissioner is hereby authorized to charge any additional fees which may be required for consideration of this Amendment to Deposit Account No. **13-4500**, Order No. **5000-5133**. A DUPLICATE OF THIS DOCUMENT IS ATTACHED.

In the event that an extension of time is required, or which may be required in addition to that requested in a petition for an extension of time, the Commissioner is requested to grant a petition for that extension of time which is required to make this response timely and is hereby authorized to charge any fee for such an extension of time or credit any overpayment for an extension of time to Deposit Account No. **13-4500**, Order No. **5000-5133**. A DUPLICATE OF THIS DOCUMENT IS ATTACHED.

Respectfully submitted,  
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Dated: November 16, 2005

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